IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., *et al.*, Defendants.	§ § § § § § § § § § § § §	CIVIL ACTION No. 6:20-CV-00893-ADA CIVIL ACTION No. 6:20-CV-00916-ADA CIVIL ACTION No. 6:20-CV-00917-ADA

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Ex. 1	Declaration of Tal Lavian PH.D. regarding Claim Construction ("Lavian Decl.")

Pursuant to the deadline set forth in the Scheduling Order (*See, e.g.,* -00917, Dkt. 29), and the guidelines regarding claim construction set forth in the Order Governing Proceedings in Patent Cases ("OGP") (Version 3.3), Defendants Huawei Technologies Co., Ltd., *et al*., (collectively, "Huawei") respectfully submit this Responsive Claim Construction Brief to Plaintiff's ("WSOU's") Opening Claim Construction Brief ("Opening Brief") (*See, e.g.*, -00917, Dkt. 40).[1]

I. Legal Standards

A. General Claim Construction Principles

The words of a patent claim "are generally given their ordinary and customary meaning." *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312 (Fed. Cir. 2005) (citations omitted). This is the meaning they would have to a person of ordinary skill in the art in view of the intrinsic evidence, i.e., the claims, the specification, and the prosecution history. *See id.* at 1313. "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

B. Means-Plus-Function Claim Construction Principles

Section 112, Paragraph 6 (pre-AIA)[2] provides that a structure may be claimed as a "means . . . for performing a specified function," and that an act may be claimed as a "step for performing a specified function." *Masco Corp. v. United States,* 303 F.3d 1316, 1326 (Fed. Cir. 2002). The scope of such "means-plus-function" claims is limited "to only the structure, materials, or acts

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[1] This Brief addresses the disputed claim terms for Case Nos. 6:20-cv-00893, -00916, and -00917. Given the restrictions in OGP (Version 3.3) governing the number of disputed claim terms that the parties may collectively present to the Court, the parties are not presenting any disputed claim terms for Case No. 6:20-cv-00893 (U.S. Pat. No. 7,933,211) and Case No. 6:20-cv-00916 (U.S. Pat. No. 7,406,074).

[2] As the patent-in-suit in the Case No. 6:20-cv-00917 (U.S. Patent No. 7,423,962) was filed in June 2003 (PCT filing date), the pre-AIA statutes apply in this case.

described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson v. Citrix Online, LLC,* 792 F.3d 1339, 1347 (Fed. Cir. 2015). Construing a means-plus-function limitation is a two-step process. First, courts determine the function of the means-plus-function limitation. *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.,* 248 F.3d 1303, 1311 (Fed. Cir. 2001). Second, courts determine "the corresponding structure described in the specification and equivalents thereof." *Id.* The structure in the specification is "corresponding" only if "the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* The corresponding structure "must include all structure that actually performs the recited function." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.,* 412 F.3d 1291, 1298 (Fed. Cir. 2005).

"In cases involving a computer-implemented invention in which the inventor has invoked means-plus-function claiming, [the Federal Circuit] has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor." *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.,* 521 F.3d 1328, 1333 (Fed. Cir. 2008). A general purpose computer, in effect, becomes a special purpose computer once it is programmed to perform a particular function. *See id.*; *see also WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999). Where the corresponding structure is a special purpose computer, the specification must provide an algorithm for accomplishing the claimed function. *See Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013) ("When dealing with a 'special purpose computer-implemented means-plus-function limitation,' we require the specification to disclose the algorithm for performing the function.").

An algorithm is "a step-by-step procedure for accomplishing a given result." *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1365 (Fed. Cir. 2012). To qualify as a

"corresponding structure" under §112, ¶ 6, the algorithm must be clearly linked in the specification to the function recited in the claim. *See B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). The algorithm may be described in "any understandable terms," such as "a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Ergo Licensing, LLC,* 673 F.3d at 1365.

C. Indefiniteness

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc*., 572 U.S. 898, 910 (2014). If it does not, the claim is invalid as indefinite. *See id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *See id*. at 908. "Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co., Ltd. v. Publ'ns Int'l, Ltd*., 844 F.3d 1370, 1377 (Fed. Cir. 2017).

In the context of a claim subject to 35 U.S.C. § 112, ¶ 6, a claim is invalid as indefinite if it fails to disclose adequate corresponding structure to perform the claimed function. *Williamson*, 792 F.3d at 1351-52. The disclosure is inadequate when one of ordinary skill in the art "would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim." *Id.* at 1352.

II. Patent-in-Suit (Case No. 6:20-cv-00917)

U.S. Patent No. 7,423,962 **(**"the '962 Patent") describes a method and apparatus for backing up a network element in a telecommunications system, such as a packet-switched mobile communication system. *See* '962 Patent, Abstract and 1:6-12. The network element comprises at least two physical cluster nodes that are redundancy units of each other, and each physical cluster

node further comprises multiple logical/virtual nodes. *See id.,* Abstract and Fig. 2. The "logical/virtual nodes" hosted by different "physical cluster nodes" are grouped into redundancy pairs to form load allocation alternatives. *See id.,* 5:9-53 and Fig. 2. Each load allocation alternative is associated with "an external IP address that is used as the user plane address of the PDP context," so that data can be transmitted to a network element by using such IP address. *Id.,* 4:51-52 and 5:54-55. When a cluster node malfunctions, "the PDP contexts whose active logical node resides in the faulty cluster node will be served by the standby logical node of the pair, which thereafter becomes the active logical node." *Id.,* 2:13-16. Importantly, the network element comprises a processor and a memory implementing software routines/algorithms to provide redundancy. *See id.,* 4:56-61.

III. Disputed Terms of the '962 Patent

A. "load allocation alternative[s]" (claims 1, 5, 6, 9, 11, 12, 18, 22, 23, 24, 29, 33, 34, 35, 36, 40, 44, 45, 47)

Huawei's Proposed Construction	WSOU's Proposed Construction
Plain and ordinary meaning	directed logical node pair, which indicates the active and standby logical node[3]

This term should be given its plain and ordinary meaning.

WSOU asserts that its proposed construction reflects the lexicography of the patentee as set forth in the specification. *See* Opening Brief, at 2. However, to act as its own lexicographer, "the patentee must 'clearly express an intent' to redefine the term." *Bradium Technologies LLC v. Iancu,* 923 F.3d 1032, 1044 (Fed. Cir. 2019) citing *Helmsderfer v. Bobrick Washroom Equip.,*

[3] At the beginning of its Opening Brief, WSOU states that "consistent with the specification's lexicography, the term 'load allocation alternative[s]' should be construed to mean a 'directed node in an active state of AAA functionality.'" Opening Brief, at 2. It thus seems that not even WSOU can determine what the "specification's lexicography" allegedly requires.

Inc., 527 F.3d 1379, 1381 (Fed. Cir. 2008). Moreover, "[t]he patentee's lexicography must . . . appear with 'reasonable clarity, deliberateness, and precision' before it can affect the claim." *Abbott Laboratories v. Syntron Bioresearch, Inc.,* 334 F.3d 1343, 1354 (Fed. Cir. 2003).

Here, the lexicography as alleged is neither clear nor precise to reflect the patentee's intent to redefine "load allocation alternatives[s]." For example, the specification describes this term in at least two different ways as shown below.

> A directed logical node pair, which indicates the active and standby logical node, is referred to as a load allocation alternative.
>
> …
>
> A directed virtual node pair has a feature visible outside the network element called a load allocation alternative LBX**1**, LBX**2**, LBY**1**, LBY**2**, LBZ**1**, LBZ**2**, which is a logical Gn, Gp or Gi interface.

'962 Patent, 2:9-11 and 5:30-33. Therefore, the language at 2:9-11 (cherry-picked by WSOU to support its construction) does not reflect any lexicography that is sufficient to narrow the definition of the disputed claim term in the manner urged by WSOU. *See* Opening Brief, at 2.

Indeed, "one of the cardinal sins of patent law [is] reading a limitation from the written description into the claims." *Phillips,* 415 F.3d at 1320. As shown above, WSOU proposed the construction for this term by referencing only to a certain portion of the specification, and excluding another relevant portion. As such, WSOU has committed the "cardinal sin" of importing limitations from exemplary disclosure in the specification into the claims. *Id*.

Moreover, WSOU's proposed construction is flawed because it cannot apply to ***both*** the "load allocation alternative" and "load allocation alternative**s**," as claimed. For example, claim 1 recites:

> forming ***load allocation alternatives*** of the logical nodes, wherein the first logical node of the ***load allocation alternative*** resides in the first cluster node and the second logical node resides in the second cluster node, wherein the first logical node is active and the second logical node on standby or vice versa.

'962 Patent, claim 1 (emphasis added). Based on the claim language above, a load allocation alternative is at least associated with two logical nodes. Therefore, "load allocation alternative**s**" cannot be a "directed logical node pair," which only indicates ***two*** logical nodes as proposed by WSOU. The specification at 2:9-11 as cited by WSOU evidences the same point. *See* '962 Patent, 2:9-11 ("***A*** directed logical node pair, which indicates the active and standby logical node, is referred to as ***a*** load allocation alternative.") (emphasis added). Accordingly, WSOU's proposal for this term should be rejected by the Court.

B. "maintenance means for maintaining logical nodes at least in first and second parallel physical cluster nodes capable of transmitting data" (claim 29)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: maintaining logical nodes at least in first and second parallel physical cluster nodes capable of transmitting data[4] **Corresponding Structure**: processor and memory of a network element implementing the algorithms of Fig. 2 and 5:9-29, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶ 6 **Function:** maintaining logical nodes at least in first and second parallel physical cluster nodes capable of transmitting data **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 5:9-29

The parties agree on the function for this means-plus-function term. As to the corresponding structure, WSOU admittedly changed its proposal from "processor and memory,

[4] Both parties proposed the same function for this term as listed above during the exchange of proposed constructions. Therefore, it appears that WSOU mistakenly placed the proposed function from a similar term appearing in claim 33 ("maintaining information on a primary and a secondary cluster node associated with the load allocation alternative") in both parties' proposals for this term. *See* Opening Brief, at 3, 8. To the extent WSOU contends that "maintaining information on a primary and secondary cluster node associated with the load allocation alternative" is the correct function for this term, Huawei reserves the right to rebut any such contention in Huawei's Su-Reply Brief.

Col. 4:56-61, Col. 5:9-29" to "processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 5:9-29," and states that "the parties are essentially in agreement with respect to this term." *See* Opening Brief, at 3. Therefore, the parties appear to agree that the corresponding structure at least includes "processor and memory of a network element," and to the extent an algorithm is required, "algorithms of 5:9-29.[5]" To the extent WSOU asserts that the corresponding structure does not require an algorithm, but includes only a "processor and memory of a network element," the parties are not in agreement, and any such contention by WSOU should be rejected, for the reasons set forth below.

First, WSOU's potential proposal directly contradicts black-letter law relating to claim construction. *See EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 621 (Fed. Cir. 2015) ("this court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor"); *see also Rain Computing, Inc. v. Samsung Electronics America, Inc., et al.*, 989 F.3d 1002, 1007 (Fed. Cir. 2021) ("these computer-readable media or storage devices amount to nothing more than a general-purpose computer"). The Federal Circuit has explicitly held that "[w]hen dealing with a 'special purpose computer-implemented means-plus-function limitation,' we require the specification to disclose the algorithm for performing the function." *Function Media,* 708 F.3d at 1318; *see also Aristocrat Techs.,* 521 F.3d at 1333.

Second, the proposed function for this term does not fall into any exceptions to the algorithm requirement as created in *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d 1303, 1316 (Fed. Cir. 2011) (holding that functions of "processing," "receiving," and "storing"

[5] The algorithms of 5:9-29 describe Fig. 2. Therefore, Huawei contends that Fig. 2 should also be part of the corresponding structure.

customer number data could be achieved by any general purpose computer without special programming). The Federal Circuit has made it clear in subsequent cases that "[i]t is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed." *Ergo Licensing, LLC,* 673 F.3d at 1365; *see also EON Corp. IP Holdings LLC,* 785 F.3d at 621-22 ("the *Katz* exception is not so broad . . . 'receiving' data, 'storing' data, and 'processing' data—the only three functions on which the *Katz* court vacated the district court's decision and remanded for the district court to determine whether disclosure of a microprocessor was sufficient").

Here, the proposed function requires maintaining multiple logical nodes in two parallel physical cluster nodes, where the first cluster node is a redundancy unit to the second cluster node, and vice versa. As agreed by both parties, the algorithms of 5:9-29 are used to perform the proposed function. Without the algorithms of 5:9-29, it cannot be known how a processor and a memory of a network element arrange and maintain the parallel cluster nodes and their logical nodes in pairs for achieving redundancy. *See* '962 Patent, 5:9-29. Clearly, the proposed function for this term is more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception to the algorithm requirement is inapplicable.

Third, WSOU fails to provide any argument as to why the algorithm requirement can be loosened for this term. Moreover, both parties agreed on the function and corresponding structure for "first forming means for forming load allocation alternatives of the logical nodes such that the first logical node of the load allocation alternative resides in the first cluster node and the second logical node resides in the second cluster node," appearing in claim 29 of the '962 Patent, which is associated with the current term as to pairing for redundancy. For that term, both parties agreed

that the algorithms of Fig. 2 and 5:30-61 are part of the corresponding structure.[6] As such, WSOU's proposed "possibility" for this term conflicts with WSOU's own position for an associated term.

Based on the foregoing, and to the extent there is a dispute with WSOU regarding the inclusion of an algorithm, Huawei's proposal requiring both "processor and memory of a network element" and "the algorithms of 5:9-29 and Fig. 2" is the correct corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. Therefore, it should be adopted by the Court.

C. "execution means for changing, when a cluster node malfunctions, the load allocation of the logical nodes of the load allocation alternatives, the active logical nodes of which reside in the faulty cluster node, by changing the logical nodes from standby to active and the active nodes to standby" (claim 29)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: changing, when a cluster node malfunctions, the load allocation of the logical nodes of the load allocation alternatives, the active logical nodes of which reside in the faulty cluster node, by changing the logical nodes from standby to active and the active nodes to standby **Corresponding Structure:** None disclosed Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 **Function:** changing, when a cluster node malfunctions, the load allocation of the logical nodes of the load allocation alternatives, the active logical nodes of which reside in the faulty cluster node, by changing the logical nodes from standby to active and the active nodes to standby **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to extent an algorithm is necessary, the algorithm at 5:62-6:3. Not indefinite.

[6] During the parties' meet-and-confer on claim construction, Huawei sent a proposal to WSOU in which Huawei proposed to change its previous proposal of the algorithms for this term from "Fig. 2 and 5:30-53," to "Fig. 2 and 5:30-61." WSOU's counsel subsequently confirmed that WSOU accepted Huawei's compromise proposal.

The dispute relating to this means-plus-function term is whether the specification of the '962 Patent discloses a structure that is clearly linked to and accomplished the claimed function. Because it does not, claim 29 of the '962 Patent is indefinite and therefore invalid. *See Williamson,* 792 F.3d at 1351-52; *see also Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1366-67 (Fed. Cir. 2008).

i. The Specification Fails to Disclose Any Algorithm for the Current Term

Notably, the specification fails to disclose any algorithm that performs the claimed function. *See* Ex. 1, Lavian Decl., at ¶ 86. In particular, the specification fails to disclose how to change the logical nodes from standby to active, or from active to standby when a cluster node malfunctions. *See id.,* at ¶ 87. In this regard, WSOU asserts that the *exemplary* algorithms are recited at 5:62-6:3.[7] *See* Opening Brief, at 4-5. However, those disclosures are insufficient because they only mirror the claimed function, as shown by the side-by-side comparison below. *See Aristocrat Techs.,* 521 F.3d at 1334 (finding insufficient "language [that] simply describes the function to be performed, not the algorithm by which it is performed"); *see also* Ex. 1, Lavian Decl., at ¶ 88.

Function as Recited in Claim 29	Language as Recited at 5:62-6:3
changing, when a cluster node malfunctions, the load allocation of the logical nodes of the load allocation alternatives, the active logical nodes of which reside in the faulty cluster node, by changing the logical nodes from standby to	If a cluster node A, B, C malfunctions, allocation of the PDP contexts, whose active unit this cluster node is, is changed. The active virtual node serving the PDP context is put on standby and the corresponding standby virtual node becomes active, unless it happens to be faulty as

[7] Means-plus-function claims are limited to the particular structures the specification describes as performing the recited function, even if a person of ordinary skill in the art would know what other structures could be employed to perform the function. *See Ergo Licensing, LLC,* 673 F.3d at 1364 ("Under § 112 ¶ 6, a patentee is only entitled to 'corresponding structure . . . described in the specification and equivalents thereof,' not any device capable of performing the function.") Therefore, any algorithm as identified by WSOU should not be, and cannot be merely "exemplary" algorithms as asserted by WSOU.

active and the active nodes to standby	well. In this description, the change of the active and standby unit is also referred to as a 'switchover'. When the corresponding standby units become active, they start serving the PDP contexts.

As shown above, the specification disclosure only repeats the function as recited in claim language, and provides no further details regarding how to change the status of logical nodes from active to standby in a faulty cluster node, and the status of logical nodes from standby to active in another cluster node. As such, a person of ordinary skill in the art would not have understood, in view of the specification, how a processor (and a memory) of a network element can communicate with a "faulty" cluster node, and further change the status of its logical nodes. *See* Ex. 1, Lavian Decl., at ¶¶ 88-89.

The only additional information in the specification disclosure is that the proposed function can serve PDP (Packet Data Protocol) contexts,[8] and that a standby virtual node ***cannot*** become active if it is faulty. However, that does not explain how to change the status of logical nodes. Even worse, it describes a situation where a standby virtual/logical node ***cannot*** become active without providing any solution or algorithm to address such an issue in order to perform the function as claimed (e.g., "changing the logical nodes from standby to active"). *See id.*

As to the balance of the specification disclosure, it only provides that the function of changing the load allocation of the logical nodes can be referred to as a switchover, and an active unit/logical node can serve the PDP context. Again, it fails to explain how to change the status of logical nodes as required by the claim language.

Moreover, the specification disclosures, including the disclosures identified by WSOU as

[8] "In the GPRS system, the logical connection between a mobile station and GGSN [which is a network element in the mobile system,] supporting the mobile station is called a PDP (Packet data protocol) context." '962 Patent, 1:32-33 and 38-40.

discussed above, fall far short of disclosing the required "step-by-step procedure" for performing the proposed function of the current term. *See Ergo Licensing, LLC,* 673 F.3d at 1365 ("an algorithm is still 'a step-by-step procedure' for accomplishing a given result"); *see also Typhoon Touch Technologies, Inc. v. Dell, Inc.,* 659 F.3d 1376, 1385 (Fed. Cir. 2011). For example, in order to identify a malfunction, and to accordingly change the status of logical nodes in multiple cluster nodes, certain coordination must occur among and between a processor and a memory of a network element comprising cluster nodes, and the cluster nodes comprising logical nodes. *See* '962 Patent, claim 29, Fig. 2, and 4:56-61. However, there is no disclosure of any algorithm for performing such coordination. *See* Ex. 1, Lavian Decl., at ¶ 90. As a result, a person of ordinary skill in the art would not have understood, in view of the specification, the timing/order of those two different changes (i.e., the changes from standby to active and from active to standby). *See id*., at ¶ 91. Further, it is not disclosed whether those two changes would be performed in the same or different ways. *See id*., at ¶ 92.

ii. "Processor and Memory of a Network Element" Alone are Insufficient to Serve as the Corresponding Structure under 35 U.S.C. § 112, ¶ 6

To the extent WSOU were to argue that the generic "processor and memory of a network element" alone can serve as the corresponding structure for this term, such an argument would violate black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B citing *EON Corp. IP Holdings LLC,* 785 F.3d at 621; *Rain Computing, Inc.,* 989 F.3d at 1007; *Function Media, L.L.C.,* 708 F.3d at 1318; *Aristocrat Techs.,* 521 F.3d at 1333; *see also Digital Retail Apps, Inc v. H-E-B, LP*, 2020 WL 376664, *6 (W.D. Tex. Jan. 23, 2020) ("When it comes to means-plus-function claims, one must identify how the software performs the functions by disclosing an algorithm in order to provide structural specificity."). Further, WSOU fails to provide any arguments as to why the algorithm requirement for a

computer-implemented function can be loosened for this term.

Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22. Here, the proposed function requires identifying a condition in which a cluster node malfunctions, and upon such a condition occurs, changing the load allocation of the logical nodes of the load allocation alternatives, the active logical nodes of which reside in the faulty cluster node. The proposed function further requires the changing is performed by changing the logical nodes from standby to active and the active nodes to standby. Therefore, the proposed function is more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable. *See* Ex. 1, Lavian Decl., at ¶ 84. As such, "processor and memory of a network element" alone are insufficient to serve as the corresponding structure for the current term. *See id.*, at ¶ 85.

Based on the foregoing, because an algorithmic structure is clearly required, yet the specification of the '962 Patent fails to disclose such an algorithmic structure that is clearly linked to the claimed function, claim 29 is indefinite and therefore invalid.

D. "defining means for defining an individual external routine address for each load allocation alternative, on the basis of which data is transmitted to the network element" (claim 29)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: defining an individual external routine address for each load allocation alternative, on the basis of which data is transmitted to the network element	Subject to 35 U.S.C. § 112, ¶ 6 **Function:** defining an individual external routine address for each load allocation alternative, on the basis of which data is transmitted to the network element

<u>Corresponding Structure</u>: processor and memory of a network element implementing the algorithms of 6:4-12, and equivalents thereof	**<u>Corresponding Structure</u>**: processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 6:4-6:12

The parties agree on the function for this means-plus-function term. As to the corresponding structure, Huawei has now adopted the algorithm proposed by WSOU (at 6:4-12). Therefore, both parties agree that the corresponding structure at least includes "processor and memory of a network element," and to the extent an algorithm is required, "the algorithms of 6:4-12."

To the extent WSOU asserts that the corresponding structure does not require any algorithm, but only includes a "processor and memory of a network element," such an assertion would violate black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B. Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22. Here, the proposed function requires defining an individual external routine address for each load allocation and so that data can be transmitted to the network element accordingly. As agreed by both parties, the algorithms of 6:4-12 are used to perform the proposed function as they disclose that the individual external routine can be defined as "an individual external user plan IP address at the Gn or Gp interface," and used as "the PDP context address of the active virtual node of the load allocation alternative." '962 Patent, 6:4-9. Therefore, the proposed function for this term is more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable.

Further, WSOU fails to provide any argument as to why the algorithm requirement can be loosened for this term. Instead, WSOU only offers the possibility that an algorithm may not be required, like it did for every means-plus-function term in dispute. Even further, WSOU has explicitly argued that the corresponding algorithms should be the algorithms of 6:4-12, and cannot be the algorithms of 7:29-35, as originally proposed by Huawei. *See* Opening Brief, at 5-6. As such, WSOU's proposed "possibility" should fail as it conflicts with WSOU's own arguments.

Based on the foregoing, Huawei's proposal requiring both "processor and memory of a network element" and "the algorithms of 6:4-12" is the correct corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. Therefore, it should be adopted by the Court.

E. "load allocation means for distributing the traffic in the apparatus on the basis of a specific load allocation plan between the cluster nodes that comprise logical nodes" (claim 32)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶6 **Function**: distributing the traffic in the apparatus on the basis of a specific load allocation plan between the cluster nodes that comprise logical nodes **Corresponding Structure:** None disclosed Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶6 **Function**: distributing the traffic in the apparatus on the basis of a specific load allocation plan between the cluster nodes that comprise logical nodes **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 6:13-18 Not indefinite.

The dispute relating to this means-plus-function term is whether the specification of the '962 Patent discloses a structure that is clearly linked to and accomplished the claimed function. Because it does not, claim 32 of the '962 Patent is indefinite and therefore invalid. *See Williamson, 792* F.3d at 1351-52; *see also Net MoneyIN, Inc.*, 545 F.3d at 1366-67.

i. The Specification Fails to Disclose Any Algorithm for the Current Term

The specification fails to disclose any algorithm that performs the claimed function. *See* Ex. 1, Lavian Decl., at ¶ 98. In particular, the specification fails to disclose how to distribute the traffic between the cluster nodes. *See id.,* at ¶ 99. In this regard, WSOU asserts that the exemplary algorithms are recited at 6:13-18. *See* Opening Brief, at 6-7. However, those disclosures are insufficient because they only mirror the function as required by the claim language, as shown by the side-by-side comparison below. *See Aristocrat Techs.,* 521 F.3d at 1334; *see also* Ex. 1, Lavian Decl., at ¶ 100.

Function as Recited in Claim 32	Language as Recited at 6:13-18
distributing the traffic in the apparatus on the basis of a specific load allocation plan between the cluster nodes that comprise logical nodes	The traffic in the network element NE may be distributed between the cluster nodes that comprise active virtual nodes on the basis of a specific load allocation plan. The traffic in the network element NE may be distributed between the cluster nodes that comprise standby virtual nodes, whereby the standby virtual nodes are made active.

As shown above, the specification disclosure only repeats the function as recited in the claim language, and provides no further details regarding how the traffic is distributed. Therefore, a person of ordinary skill in the art would not have understood, in view of the specification, how a processor (and a memory) of a network element can adjust/distribute the traffic between different cluster nodes. *See* Ex. 1, Lavian Decl., at ¶ 101. For example, the specification does not disclose whether the traffic is distributed/flowed directly between the cluster nodes, or the amount of traffic is adjusted before it being sent into the cluster nodes. *See id.,* at ¶¶ 102-103. The only additional information in the specification disclosure is that the logical nodes can be virtual nodes. However, that does not explain how to distribute the traffic.

As to the balance of the specification disclosure as cited by WSOU, it at most discloses

that a standby virtual node is activated when the traffic is distributed to it. However, disclosing the status of logical/virtual nodes to which the traffic is distributed is not equal to disclosing how to distribute the traffic between multiple cluster nodes. *See id.,* at ¶ 100.

Moreover, the specification disclosures, including the disclosures identified by WSOU as discussed above, fall far short of disclosing the required "step-by-step procedure" for performing the proposed function of the current term. *See Ergo Licensing, LLC,* 673 F.3d at 1365; *see also Typhoon Touch Technologies, Inc.,* 659 F.3d at 1385. For example, the specification is wholly silent as to what it means by "specific load allocation plan," and how it can help to distribute the traffic. The specification at most provides algorithms regarding forming load allocation alternatives (at Fig. 2 and 5:30-61) corresponding to "first forming means" in claim 29 as both parties agreed.[9] However, the disclosures regarding how to form load allocation alternatives of logical nodes in cluster nodes cannot inform how to distribute the traffic (e.g., amount or path of the traffic) between the cluster nodes. Therefore, a person of ordinary skill in the art would not have understood how the function as recited by claim language is performed in view of the specification. *See* Ex. 1, Lavian Decl., at ¶ 104.

ii. "Processor and Memory of a Network Element" Alone are Insufficient to Serve as the Corresponding Structure under 35 U.S.C. § 112, ¶ 6

To the extent WSOU were to take the position that the generic "processor and memory of a network element" alone can serve as the corresponding structure for this term, such a position would violate black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B. Also, WSOU fails to provide any arguments as to why the algorithm requirement for a computer-implemented function can be loosened for this term.

Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the

[9] *See* FN. 6 above.

algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22. Here, the proposed function requires distributing the traffic in the apparatus between multiple cluster nodes that comprise multiple logical nodes. Therefore, the proposed function is more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable. *See* Ex. 1, Lavian Decl., at ¶ 96. As such, "processor and memory of a network element" alone are insufficient to serve as the corresponding structure for the current term. *See id.,* at ¶ 97.

Based on the foregoing, because the specification of the '962 Patent fails to disclose an algorithmic structure that is clearly linked to the claimed function in the current term, claim 32 is indefinite and therefore invalid.

F. "said maintenance means are also configured to maintain information on a primary and a secondary cluster node associated with the load allocation alternative" (claim 33)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶6 **Function**: maintaining information on a primary and a secondary cluster node associated with the load allocation alternative **Corresponding Structure:** processor and memory of a network element implementing the algorithms of 6:35-44, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶6 **Function**: maintaining information on a primary and a secondary cluster node associated with the load allocation alternative **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 6:35-44

The parties agree on the function for this means-plus-function term. As to the corresponding structure, WSOU stated that "the parties are essentially in agreement with respect

to this term." *See* Opening Brief, at 8. Therefore, both parties appear to agree that the corresponding structure at least includes "processor and memory of a network element," and to the extent an algorithm is required, "the algorithms of 6:35-44."

To the extent WSOU asserts that the corresponding structure does not require an algorithm, but only includes a "processor and memory of a network element," WSOU again fails to argue why "said maintenance means" in claim 33 (which depends from the maintenance means in claim 29) is not subject to the algorithm requirement. Also, the *Katz* exception is similarly inapplicable for this term because the proposed function of ensuring that data still can be transmitted via a secondary node after a switchover is obviously more than simply "receiving," "storing," or "processing" data.

Without the algorithms of 6:35-44, as identified by both parties, a person of ordinary skill in the art would not have understood that the information associated with the load allocation alternative to be maintained, as required by the proposed function, is the routing information about a primary route and secondary route to the load allocation alternative. *See* '962 Patent, 6:35-44. Therefore, Huawei's proposal requiring both "processor and memory of a network element" and "the algorithms of 6:35-44" is the correct corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. Therefore, it should be adopted by the Court.

G. "changing means for changing load allocation in such a manner that after the switchover of a load allocation alternative, data is transmitted through a physical interface of the backup cluster node to the redundancy unit of the cluster node" (claim 34)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: changing load allocation in such a manner that after the switchover of a load allocation alternative, data is transmitted	Subject to 35 U.S.C. § 112, ¶6 **Function**: changing load allocation in such a manner that after the switchover of a load allocation alternative, data is transmitted

through a physical interface of the backup cluster node to the redundancy unit of the cluster node **Corresponding Structure:** processor and memory of a network element implementing the algorithms of Figs. 3 and 4, 6:35-7:25, and 7:50-8:16, and equivalents thereof	through a physical interface of the backup cluster node to the redundancy unit of the cluster node **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 11:64-12:15

i. An Algorithm is Required for this Means-Plus-Function Term

The parties agree on the function for this means-plus-function term. As to the corresponding structure, both parties agree that the corresponding structure at least includes "processor and memory of a network element." However, to the extent WSOU asserts that the corresponding structure does not require any algorithm, but only includes a "processor and memory of a network element," such an assertion violates black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B. Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22.

The proposed function for this term requires changing load allocation alternative, and so that data is transmitted through a physical interface of the backup cluster node to the redundancy unit of the cluster node after the switchover of a load allocation alternative. Therefore, the proposed function involves operations of a processor and a memory of a network element, a cluster node, and a backup cluster node to change load allocation by changing a physical interface after the switchover of a load allocation alternative. As such, the proposed function for this term is

more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable.

WSOU further fails to provide any argument as to why the algorithm requirement can be loosened for this term. Instead, WSOU only throws out the possibility that an algorithm may not be required (without support), like it did for every means-plus-function term in dispute. Accordingly, the corresponding structure for this term should include the algorithms.

ii. The Proper Corresponding Algorithm is that Proposed by Huawei

WSOU asserts that the exemplary algorithms for this term are disclosed in the specification at 11:64-12:15 (*see* Opening Brief, 8-9), without any explanation as to which of these, if any, are clearly linked to the claimed function. WSOU's proposal is further problematic because the paragraphs at 11:64-12:15 disclose the implementation of the ***second embodiment***. *See* '962 Patent, 8:28-12:21. For all the other means-plus-function terms in claim 29, from which claim 34 depends, WSOU points to the paragraphs associated with the implementation of the ***first embodiment***.[10] And the means-plus-function terms in claim 29 are closely associated with this term (e.g., maintenance means and first forming means in claim 29 and this term are all associated with the "load allocation alternative").

As opposed to WSOU's, Huawei's proposed construction properly identifies the algorithms of Figures 3 and 4, 6:35-7:25, and 7:50-8:16 as the algorithms that the specification discloses as necessary to implement the proposed function. All the algorithms as identified by Huawei are associated with the implementation of the ***first embodiment*** of the '962 Patent, which

[10] For example, both parties agree that the algorithms of Fig. 2 and 5:30-61 are part of the corresponding structure for "first forming means," and that the algorithms of 5:9-29 are part of the corresponding structure for "maintenance means." Importantly, Fig. 2 and 5:9-61 are associated with the implementation of the first embodiment of the '962 Patent. *See* '962 Patent, 5:5-8:25.

is consistent with Huawei's proposals for "maintenance means," "first forming means," and "defining means" in claim 29.

Huawei's proposal further covers the routing-based solution as well as the link layer solution, both of which can be used to perform the change of the physical interface after the switchover of a load allocation alternative as claimed. For example, the routing-based solution teaches that a network element can maintain the information of the primary route (associated with the physical interface of the cluster node having active logic node(s)) and secondary route (associated with the physical interface of the cluster node having standby logic node(s)) to the load allocation alternative, and the forwarding information that can enable indication of the primary and secondary routes. *See* '962 Patent, 6:35-61, 7:50-65, and Figs. 3-4. Accordingly, "[w]hen the primary connection malfunctions, data packets are guided to use the secondary route of the load allocation alternative." *Id.*, 6:57-59. As a further example, the link layer solution teaches that a standby unit can monitor the physical connection/interface of the active unit and so that it can start using the backup physical interface upon a malfunction of the active unit (after a switchover). *See id.,* 6:62-7:19, 7:66-8:16,[11] and Figs. 3-4.

Based on the foregoing, Huawei's proposal requiring both "processor and memory of a network element" and "the algorithms of Figs. 3 and 4, 6:35-7:25, and 7:50-8:16" is the correct corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6, and thus should be adopted by the Court.

H. "switching means for transmitting data by using a routing address defined for the load allocation alternative even after a switchover of the load allocation alternative" (claim 35)

[11] WSOU's proposed citations for the algorithms partially overlap with Huawei's proposal regarding the link layer solution. For example, the description at 6:66-7:6 and 7:66-8:6 proposed by Huawei is similar to the description at 11:64-12:4 proposed by WSOU. However, WSOU fails to explain why its proposed algorithms only include the link layer solution.

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: transmitting data by using a routing address defined for the load allocation alternative even after a switchover of the load allocation alternative **Corresponding Structure: p**rocessor and memory of a network element implementing the algorithms of 12:24-61, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶6 **Function**: transmitting data by using a routing address defined for the load allocation alternative even after a switchover of the load allocation alternative **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 10:7-12

i. An Algorithm is Required for this Means-Plus-Function Term

The parties agree on the function for this means-plus-function term. As to the corresponding structure, both parties agree that the corresponding structure at least includes "processor and memory of a network element." However, to the extent WSOU asserts that the corresponding structure does not require any algorithm, but only includes a "processor and memory of a network element," such an assertion would violate black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B. Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22.

The proposed function for this term requires transmitting data by using a routing address defined for the load allocation alternative even after a switchover of the load allocation alternative. Therefore, the proposed function involves identifying and utilizing a routing address for data transmissions all the way from before to even after a switchover of the load allocation alternative.

As such, the proposed function for this term is more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable.

WSOU further fails to provide any argument as to why the algorithm requirement can be loosened for this term. Instead, WSOU only throws out the possibility that an algorithm may not be required (without support), like it did for every means-plus-function term in dispute. Accordingly, the corresponding structure for his term should require the algorithms.

ii. The Proper Corresponding Algorithm is that Proposed by Huawei

WSOU asserts that the exemplary algorithms for this term are disclosed in the specification at 10:7-12 (*see* Opening Brief, 9-10), without any explanation as to which of these, if any, are clearly linked to the claimed function. Moreover, WSOU's proposal only provides general description about the purpose of the routing address. *See e.g.,* '962 Patent, 10:7-9 ("The routing address of the load allocation alternative is used as the PDP context address of the active virtual node of the load allocation alternative."), and 10:11-12 ("The IP address is used to indicate the route through the physical interface of the cluster node."). This disclosure fails to provide any details regarding the use of a routing address before and/or even after a switchover of the load allocation alternative.

As opposed to WSOU's, Huawei's proposed construction properly identifies the algorithms of 12:24-61 as the algorithms that the specification discloses as necessary to implement the proposed function. In Huawei's proposal, the proposed algorithms, including forwarding, unicast, and multicast mode methods, disclose how to utilize a routing address defined for the load allocation alternative all the way from before to even after a switchover as claimed to resolve an issue of packet loss due to a switchover of the load allocation alternative. *See id.,* 12:24-31. For example, the forwarding mode method teaches that one of the cluster nodes is selected to be a

master node "to the group IP routing address of the network element or to the external address(es) of the load allocation alternative," and the selected master node "receives the packets addressed to the group IP routing address or to the external address of the load allocation alternative and forwards them to the active cluster node . . . based for instance on the load allocation alternative address of the data packet." *Id.,* 12:32-40. Therefore, the forwarding mode method teaches that from before to even after a switchover, by utilizing a master node associated with the address defined for the load allocation alternative, the data packet can always be forwarded to the active cluster node using such address. *See id*.

Based on the foregoing, Huawei's proposal requiring both "processor and memory of a network element" and "the algorithms of 12:24-61" is the correct corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. Therefore, it should be adopted by the Court.

I. "performing means for performing a switchover of a load allocation alternative inside the network element" (claim 36)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 **Function**: performing a switchover of a load allocation alternative inside the network element **Corresponding Structure:** None disclosed Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶6 **Function**: performing a switchover of a load allocation alternative inside the network element **Corresponding Structure:** processor and memory of a network element (4:56-61), and equivalents thereof, and to the extent an algorithm is necessary, the algorithm of 10:34-38 Not indefinite.

The dispute relating to this means-plus-function term is whether the specification of the '962 Patent discloses a structure that is clearly linked to and accomplished the claimed function. Because it does not, claim 36 of the '962 Patent is indefinite and therefore invalid. *See Williamson,*

792 F.3d at 1351-52; *see also Net MoneyIN, Inc.*, 545 F.3d at 1366-67.

i. The Specification Fails to Disclose Any Algorithm for the Current Term

The specification fails to disclose any algorithm that performs "performing a switchover a load allocation alternative inside the network element" as claimed. *See* Ex. 1, Lavian Decl., at ¶ 110. WSOU asserts that the exemplary algorithms are recited at 10:34-38. *See* Opening Brief, at 10-11. However, those disclosures are insufficient because they only disclose that information on a primary and secondary route to the load allocation alternative can be maintained inside GGSN. *See* '962 Patent, 10:34-38. These disclosures at most relate to "inside the network element" as claimed, but are wholly silent as to how to perform a switchover of a load allocation alternative. *See* Ex. 1, Lavian Decl., at ¶ 111. A person of ordinary skill in the art would not have understood how to perform a switchover in a network element by solely knowing the location (network element/GGSN) of the information on a primary and secondary route to the load allocation alternative as recited at 10:34-38. *See id*.

The other disclosures in the specification also fail to disclose any corresponding structure or algorithms for this term. For example, the specification at 6:53-57 states "[t]he load allocation change or a switchover between the active unit and the standby unit is not visible outside the network element, because the external IP address of the load allocation alternative is the only address visible outside the network element." '962 Patent, 6:53-57; *see also id.,* 7:10-15. However, the disclosure regarding whether or not a switchover of a load allocation alternative is visible outside a network element still cannot inform a person of ordinary skill in the art of how the switchover is performed. *See* Ex. 1, Lavian Decl., at ¶ 112.

ii. "Processor and Memory of a Network Element" Alone are Insufficient to Serve as the Corresponding Structure under 35 U.S.C. § 112, ¶ 6

To the extent WSOU were to take the position that the generic "processor and memory of

a network element" alone can serve as the corresponding structure for this term, such a position would violate black letter law relating to determining the corresponding structure pursuant to 35 U.S.C. § 112, ¶ 6. *See* Section III.B. Also, WSOU fails to provide any arguments as to why the algorithm requirement for a computer-implemented function can be loosened for this term.

Moreover, the proposed function for this term does not fall into any *Katz* exceptions to the algorithm requirement, which have been explained by the Federal Circuit to be narrow and rare circumstances. *See* Section III.B citing *In re Katz Interactive Call Processing Patent Litig.,* 639 F.3d at 1316; *Ergo Licensing, LLC,* 673 F.3d at 1365; and *EON Corp. IP Holdings LLC,* 785 F.3d at 621-22. The proposed function for this term is apparently more than simply "receiving," "storing," or "processing" data, and so the *Katz* exception is inapplicable. *See* Ex. 1, Lavian Decl., at ¶ 108. As such, "processor and memory of a network element" alone, as proposed by WSOU, are insufficient to serve as the corresponding structure for the current term. *See id.,* at ¶ 109.

Based on the foregoing, because the specification of the '962 Patent fails to disclose an algorithmic structure that is clearly linked to the claimed function in the current term, claim 36 is indefinite and therefore invalid.

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CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

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